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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,821	03/03/2004	Shingo Nagano	249564US2	1501

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EXAMINER

NGUYEN, THANH NHAN P

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/790,821

Applicant(s)

NAGANO ET AL.

Examiner

(Nancy) Thanh-Nhan P. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 6 is/are rejected.
- 7) ☒ Claim(s) 3,4 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/31/2006.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This communication is responsive to pre-appeal brief filed 2/21/2006. This case has been reopened prosecution.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishimura et al (US 2002/0149729).**

Nishimura et al discloses (figs. 3 and 7) a liquid crystal display device comprising:

Claim 1:

- an insulating substrate (SUB1)
- a plurality of pixels formed in the insulating substrate
- a pixel electrode (PX) formed in at least one pixel of the plurality of pixels
- a common electrode (CE) formed in at least one pixel of the plurality of pixels and placed across from the pixel electrode
- a capacitor electrode (CL) connected to the common electrode (through TH)
- a scan line (GL) formed substantially parallel to the capacitor electrode

- a signal line (DL) formed to cross the scan line with an insulating layer therebetween, for supplying a signal to the pixel electrode
- a counter substrate (SUB2) placed opposite to the insulating substrate with liquid crystals (LC) filled therebetween
- a capacitor terminal (horizontal portion of the pixel electrode) placed opposite to the capacitor electrode with the insulating layer (GI) therebetween to generate capacitance, and connected to the pixel electrode
- a drain electrode (SD) electrically connected to the capacitor terminal through the pixel electrode
- wherein the liquid crystal display device displays images by applying an electric field substantially parallel to the insulating substrate between the pixel electrode and the common electrode to align the liquid crystal, and the pixel electrode comprises at least two voltage supply paths to the capacitor terminal

Claim 2:

- a gate electrode (GE), [fig. 5], connected to the scan line
- a source electrode (SD) connected to the signal line
- a drain electrode (SD) placed opposite to the source electrode and connected to the pixel electrode, wherein the at least two voltage supply paths to the capacitor terminal in the pixel electrode are provided between a connection of the pixel

electrode to the drain electrode and a connection of the pixel electrode to the capacitor terminal.

Claim 5:

a liquid crystal display device according to claim 1:

- wherein the capacitor electrode and the capacitor terminal are located approximately in a middle of the pixel in a direction of the signal line

Claim 6:

a liquid crystal display device according to claim 2:

- wherein the capacitor electrode and the capacitor terminal are located approximately in a middle of the pixel in a direction of the signal line

***Allowable Subject Matter***

Claims 3, 4 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 3, 4 and 7 are allowed since there is no prior art of record that teaches or suggests a liquid crystal display device comprising a relationship of various elements as claimed with the specific allowable subject matter cited as the following:

- a pixel electrode formed in at least one pixel of the plurality of pixels

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- a common electrode formed in at least one pixel of the plurality of pixels and placed across from the pixel electrode
- a capacitor electrode connected to the common electrode
- a capacitor terminal placed opposite to the capacitor electrode with the insulating layer therebetween to generate capacitance, and connected to the pixel electrode
- wherein the pixel electrode and the common electrode are formed in the same conductive layer, and the pixel electrode is connected to the capacitor terminal through at least two contact holes created in the insulating layer above the capacitor terminal

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.


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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen

Examiner

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ANDREW SCHECHTER  
PRIMARY EXAMINER